

Scaled data based on original data using
LM-79-08 Approved Method: Electrical and Photometric Measurements of Solid-
State Lighting Products

Test Report Prepared for
Cooper Lighting Solutions
(formerly Eaton)

Brand: McGRAW-EDISON

Report Number: P198478

Luminaire Tested: **TT-C4-LED-E1-WQ-SG-MS/DIM-UPL**

Issue Date: 3/3/2020

Test Information

Test Method: LM-79-08
Report Number: P198478
REPORT IS FROM IESNA LM-79-08 TEST DATA - UPLIGHT (P27139) AND DOWNLIGHT
Test Lab: INNOVATION CENTER P2
Issue Date: 3/3/2020
Manufacturer: COOPER LIGHTING SOLUTIONS (FORMERLY EATON)
Product Line: McGRAW-EDISON
Catalog Number: TT-C4-LED-E1-WQ-SG-MS/DIM-UPL
Description: TOPTIER LED PARKING GARAGE LUMINAIRE WITH UPLIGHT
WIDE DISTRIBUTION WITH SOFTENING GLASS LENS AND DIMMING OCCUPANCY SENSOR
Light Source: (160) 4000K CCT, 70 CRI LEDS
Ballast/Driver: ELECTRONIC DRIVER

Summary

Lumens per Lamp: N/A
Luminaire Lumens: 7159.4 lumens
Efficiency: N/A
Efficacy: 95.0 lumens/watt
Luminous Opening: Vertical Cylinder (Dia: 1.12' x H: 0.1')
IES Classification: Type V - Short - Semi-Cutoff
BUG Rating: B2 - U4 - G1

Input Watts (W): 75.4
Input Voltage (V): NR
Input Current (Ain): NR
Voltage Rise (V): NR
Power Factor: NR
Total Harmonic Distortion (THDi): NR
Frequency (hertz): 60
Stabilization Time: NR
Operation Time: NR
Ambient Temperature (°C): NR
Test Distance: 25 FT

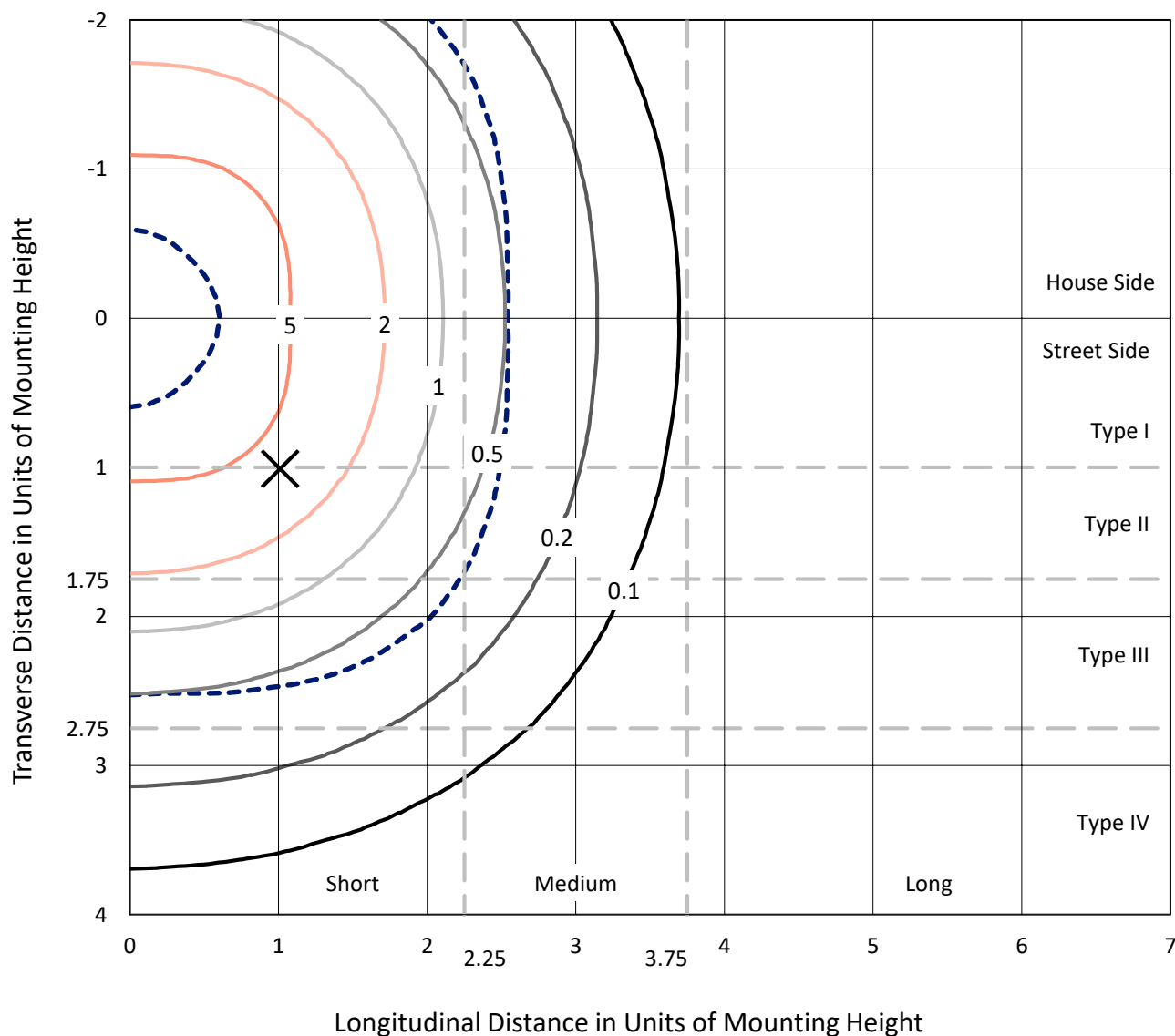


REPORT NUMBER: P198478

CATALOG NUMBER: TT-C4-LED-E1-WQ-SG-MS/DIM-UPL

Iso-Footcandle Lines of Horizontal Illumination

✕ Max cd
 - - - 1/2 Max cd

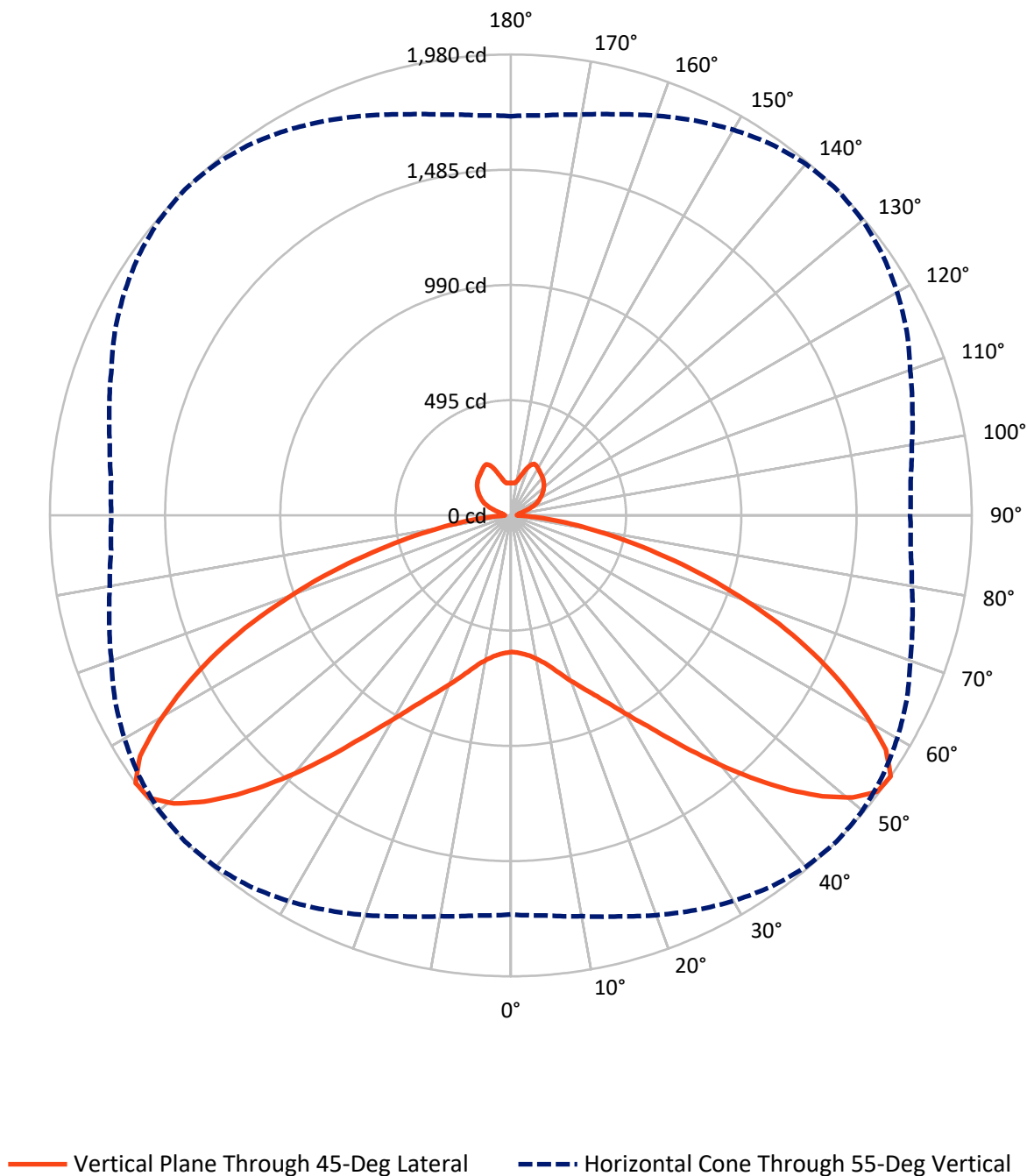


Based on 10 foot mounting height. Maximum calculated value = 6.5 fc
 Type V - Short - Semi-Cutoff

REPORT NUMBER: P198478

CATALOG NUMBER: TT-C4-LED-E1-WQ-SG-MS/DIM-UPL

Luminous Intensity Polar Plot



REPORT NUMBER: P198478

CATALOG NUMBER: TT-C4-LED-E1-WQ-SG-MS/DIM-UPL

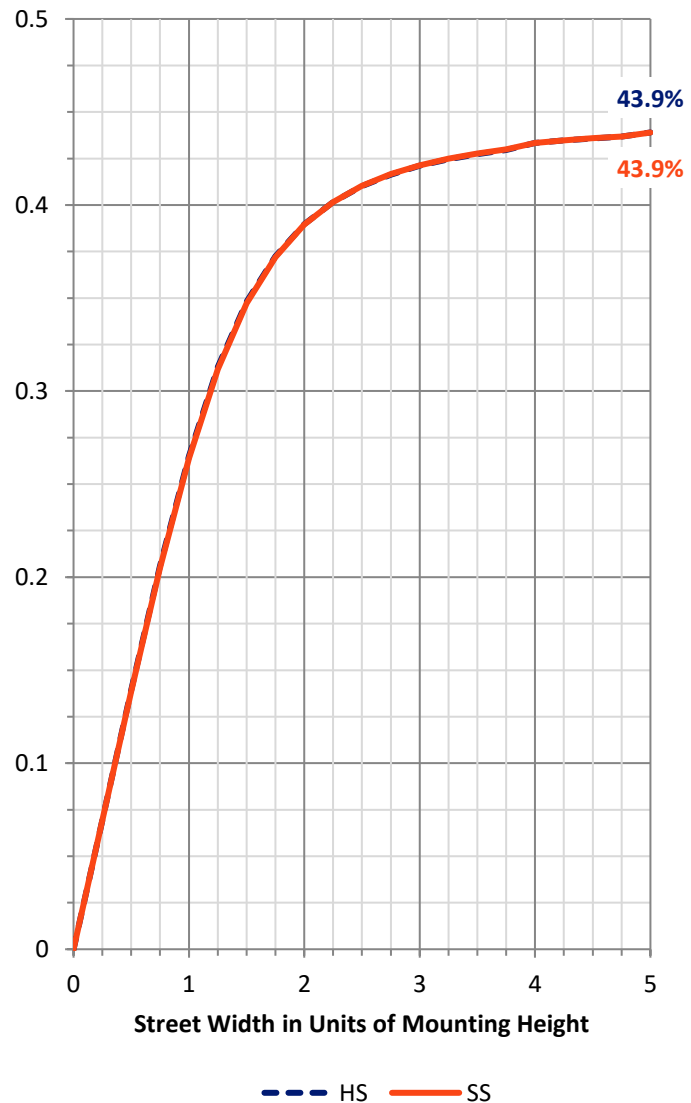
FLUX DISTRIBUTION:

		Downward	Upward	Total
House Side	Lumens	3167.7	412.0	3579.7
	% Fixture	44.2	5.8	50.0
Street Side	Lumens	3167.7	412.0	3579.7
	% Fixture	44.2	5.8	50.0
Total	Lumens	6335.5	824.0	7159.4
	% Fixture	88.5	11.5	100.0

ZONAL LUMENS:

Zone	Lumens	% Fixture
0°-10°	58.0	0.8
10°-20°	196.5	2.7
20°-30°	400.2	5.6
30°-40°	730.9	10.2
40°-50°	1241.0	17.3
50°-60°	1616.1	22.6
60°-70°	1307.1	18.3
70°-80°	642.3	9.0
80°-90°	143.4	2.0
90°-100°	38.3	0.5
100°-110°	59.4	0.8
110°-120°	119.3	1.7
120°-130°	148.7	2.1
130°-140°	153.2	2.1
140°-150°	136.0	1.9
150°-160°	103.7	1.4
160°-170°	51.8	0.7
170°-180°	13.6	0.2
0°-90°	6335.5	88.5
0°-180°	7159.4	100.0

Coefficient of Utilization



REPORT NUMBER: P198478

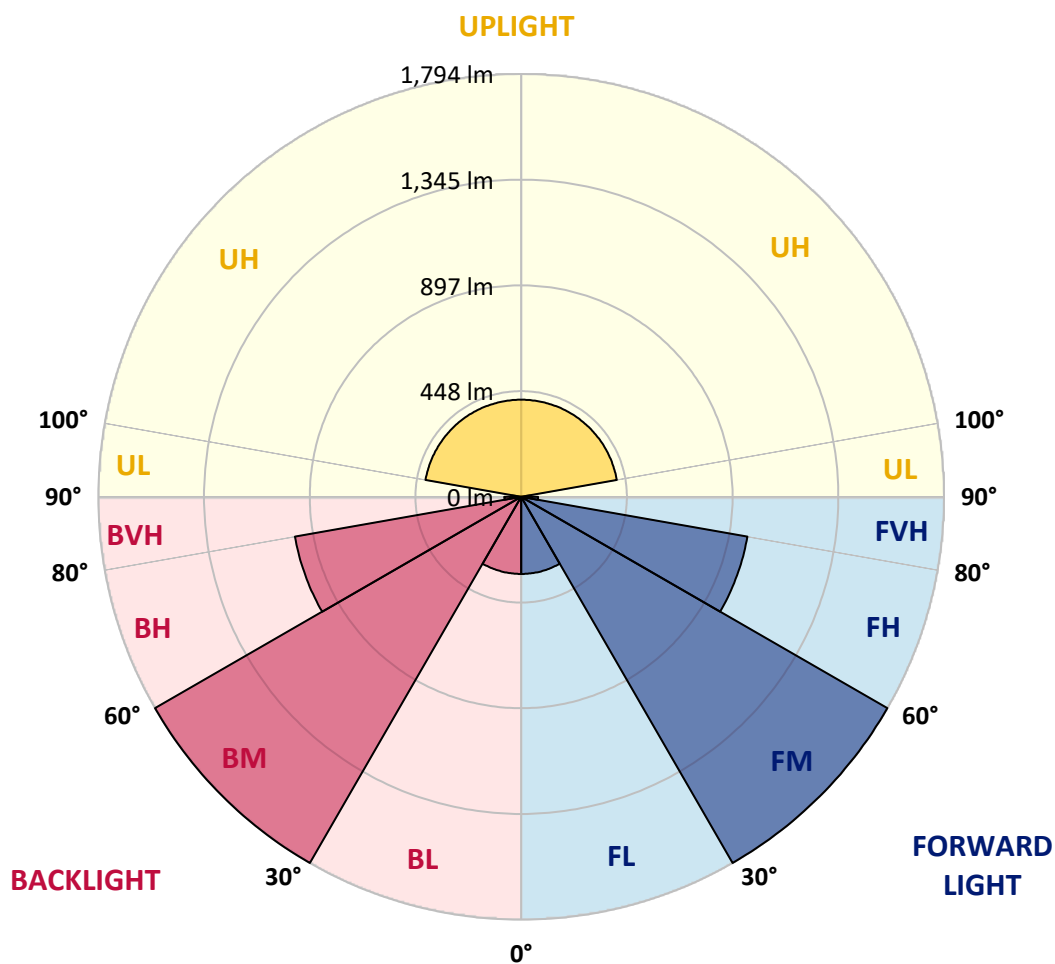
CATALOG NUMBER: TT-C4-LED-E1-WQ-SG-MS/DIM-UPL

LUMINAIRE CLASSIFICATION SYSTEM LUMEN TABLE AND BUG RATING:

Zone		Lumens	% Fixture	Zone Rating/Lumen Limit		
				B	U	G
FL	(0°-30°)	327.3	4.6			
FM	(30°-60°)	1794.0	25.1			
FH	(60°-80°)	974.7	13.6			G1/1800
FVH	(80°-90°)	71.7	1.0			G1/100
BL	(0°-30°)	327.3	4.6	B1/500		
BM	(30°-60°)	1794.0	25.1	B2/2500		
BH	(60°-80°)	974.7	13.6	B2/1000		G1/1800
BVH	(80°-90°)	71.7	1.0			G1/100
UL	(90°-100°)	38.3	0.5		U2/50	
UH	(100°-180°)	412.0	5.8		U3/500	

BUG Rating: B2-U4-G1

Type V Short



REPORT NUMBER: P198478

CATALOG NUMBER: TT-C4-LED-E1-WQ-SG-MS/DIM-UPL

CANDELA DISTRIBUTION (FULL):

	0°	5°	10°	15°	20°	25°	30°	35°	40°	45°	50°
0°	586.6	586.6	586.6	586.6	586.6	586.6	586.6	586.6	586.6	586.6	586.6
2.5°	589.2	589.2	589.2	589.2	589.2	589.2	590.5	590.5	590.5	590.5	590.5
5°	597.0	597.0	597.0	598.3	598.3	598.3	598.3	598.3	598.3	598.3	598.3
7.5°	608.6	607.3	608.6	608.6	608.6	610.0	610.0	608.6	610.0	610.0	610.0
10°	625.5	624.1	625.5	625.5	625.5	626.8	626.8	626.8	626.8	628.1	628.1
12.5°	650.1	648.8	650.1	651.4	650.1	651.4	651.4	651.4	651.4	651.4	651.4
15°	681.2	679.9	681.2	682.4	681.2	683.7	683.7	682.4	682.4	683.7	683.7
17.5°	718.7	716.2	717.4	718.7	718.7	721.4	721.4	720.0	721.4	722.5	721.4
20°	757.5	755.0	756.3	760.2	760.2	761.5	764.0	762.8	764.0	765.3	764.0
22.5°	800.3	799.0	800.3	804.1	804.1	805.5	809.3	809.3	809.3	810.6	809.3
25°	846.9	845.6	846.9	850.8	850.8	853.4	858.6	858.6	859.9	861.2	859.9
27.5°	901.4	900.0	902.6	906.5	907.9	911.7	918.2	919.5	920.7	922.0	919.5
30°	964.8	962.2	966.0	972.5	975.1	980.3	988.1	990.6	992.0	995.8	993.3
32.5°	1037.3	1034.7	1039.9	1047.6	1051.6	1059.3	1069.7	1072.2	1076.1	1078.7	1074.9
35°	1122.7	1121.5	1126.7	1138.3	1144.8	1153.8	1168.1	1172.0	1174.6	1179.8	1174.6
37.5°	1217.3	1215.9	1225.1	1238.1	1249.7	1263.9	1279.4	1285.9	1289.9	1296.3	1289.9
40°	1322.2	1320.9	1332.5	1348.1	1362.3	1380.5	1399.9	1408.9	1416.8	1423.2	1415.4
42.5°	1429.7	1429.7	1443.9	1460.7	1481.5	1503.5	1525.5	1535.8	1548.8	1552.7	1543.6
45°	1533.3	1534.5	1548.8	1569.5	1599.3	1627.8	1652.4	1665.4	1679.5	1683.5	1671.9
47.5°	1631.7	1633.1	1645.9	1673.2	1706.8	1739.1	1769.0	1787.1	1801.3	1802.6	1793.6
50°	1712.0	1717.2	1734.0	1758.6	1793.6	1827.2	1863.5	1886.8	1901.0	1905.0	1895.8
52.5°	1743.1	1752.1	1771.6	1802.6	1842.7	1877.7	1917.8	1947.6	1964.5	1970.9	1963.3
55°	1714.5	1725.0	1748.3	1783.3	1827.2	1871.2	1912.7	1947.6	1970.9	1980.1	1972.3
57.5°	1651.1	1652.4	1675.7	1710.7	1750.8	1796.1	1836.2	1868.7	1890.7	1899.8	1898.5
60°	1541.0	1541.0	1563.1	1596.8	1627.8	1674.4	1708.2	1732.7	1748.3	1758.6	1756.0
62.5°	1393.4	1393.4	1412.8	1447.7	1478.9	1519.0	1551.5	1577.3	1587.6	1599.3	1601.9
65°	1228.9	1228.9	1247.1	1282.0	1310.5	1346.8	1377.8	1402.4	1412.8	1427.1	1424.4
67.5°	1054.1	1052.9	1069.7	1099.4	1126.7	1160.3	1190.1	1213.4	1225.1	1241.9	1230.3
70°	874.1	874.1	888.4	911.7	931.0	964.8	993.3	1016.6	1025.6	1039.9	1033.4
72.5°	703.2	701.9	713.5	731.7	747.2	777.0	793.8	819.8	827.5	846.9	836.6
75°	549.0	546.5	555.5	568.5	578.8	598.3	611.3	631.9	638.4	651.4	646.3
77.5°	413.1	411.8	415.6	424.8	432.5	448.1	453.3	463.6	468.8	481.7	471.4
80°	296.6	292.7	296.6	301.7	304.4	316.0	317.2	321.2	323.7	332.9	322.4
82.5°	199.5	194.3	196.8	200.7	200.7	207.2	208.5	207.2	212.3	215.0	209.8
85°	113.9	110.1	111.4	113.9	112.7	116.6	116.6	115.2	119.1	119.1	116.6
87.5°	37.6	35.0	36.3	37.6	37.6	38.8	40.1	38.8	41.5	41.5	38.8
90°	36.0	36.0	36.0	36.0	35.0	34.0	31.0	29.0	27.0	26.0	26.0
92.5°	40.0	39.0	39.0	38.0	36.0	34.0	32.0	29.0	27.0	27.0	27.0
95°	44.0	43.0	42.0	41.0	38.0	36.0	34.0	32.0	31.0	30.0	30.0
97.5°	42.0	42.0	41.0	40.0	38.0	37.0	36.0	35.0	34.0	33.0	32.0
100°	45.0	45.0	45.0	44.0	42.0	40.0	39.0	38.0	36.0	36.0	35.0
102.5°	51.0	51.0	50.0	49.0	47.0	46.0	45.0	44.0	42.0	42.0	42.0
105°	60.0	60.0	59.0	57.0	55.0	54.0	53.0	53.0	51.0	52.0	52.0
107.5°	72.0	72.0	72.0	70.0	68.0	67.0	66.0	66.0	66.0	68.0	68.0
110°	86.0	86.0	87.0	89.0	86.0	85.0	85.0	86.0	86.0	87.0	86.0

REPORT NUMBER: P198478

CATALOG NUMBER: TT-C4-LED-E1-WQ-SG-MS/DIM-UPL

CANDELA DISTRIBUTION (continued):

	0°	5°	10°	15°	20°	25°	30°	35°	40°	45°	50°
112.5°	101.0	102.0	104.0	108.0	106.0	107.0	107.0	110.0	108.0	107.0	103.0
115°	121.0	122.0	123.0	128.0	126.0	128.0	127.0	129.0	126.0	124.0	120.0
117.5°	140.0	141.0	141.0	144.0	141.0	141.0	140.0	141.0	138.0	136.0	135.0
120°	152.0	153.0	154.0	155.0	151.0	149.0	147.0	149.0	147.0	147.0	148.0
122.5°	161.0	162.0	163.0	164.0	159.0	154.0	153.0	155.0	156.0	158.0	158.0
125°	169.0	169.0	170.0	172.0	168.0	163.0	160.0	165.0	166.0	168.0	167.0
127.5°	177.0	177.0	179.0	181.0	177.0	171.0	170.0	176.0	177.0	178.0	175.0
130°	187.0	188.0	190.0	191.0	185.0	179.0	179.0	186.0	187.0	186.0	183.0
132.5°	198.0	199.0	200.0	201.0	193.0	186.0	187.0	193.0	195.0	195.0	191.0
135°	210.0	210.0	211.0	209.0	199.0	192.0	193.0	199.0	202.0	201.0	197.0
137.5°	221.0	219.0	217.0	213.0	203.0	197.0	198.0	205.0	207.0	208.0	203.0
140°	229.0	226.0	222.0	216.0	205.0	200.0	201.0	207.0	210.0	213.0	212.0
142.5°	235.0	231.0	225.0	218.0	206.0	201.0	202.0	208.0	212.0	218.0	218.0
145°	235.0	230.0	225.0	218.0	207.0	202.0	204.0	211.0	215.0	223.0	225.0
147.5°	230.0	227.0	223.0	219.0	210.0	207.0	209.0	216.0	220.0	229.0	233.0
150°	224.0	221.0	219.0	220.0	215.0	214.0	216.0	222.0	227.0	235.0	239.0
152.5°	216.0	214.0	216.0	221.0	220.0	220.0	224.0	230.0	234.0	241.0	241.0
155°	208.0	207.0	211.0	219.0	222.0	224.0	229.0	237.0	239.0	243.0	239.0
157.5°	203.0	203.0	207.0	216.0	220.0	224.0	229.0	234.0	232.0	235.0	230.0
160°	199.0	198.0	203.0	210.0	212.0	213.0	216.0	219.0	216.0	219.0	216.0
162.5°	185.0	184.0	188.0	193.0	194.0	193.0	196.0	198.0	195.0	198.0	196.0
165°	169.0	167.0	169.0	173.0	173.0	173.0	175.0	176.0	174.0	177.0	175.0
167.5°	154.0	152.0	153.0	156.0	156.0	155.0	157.0	159.0	157.0	159.0	158.0
170°	142.0	141.0	142.0	145.0	144.0	144.0	146.0	147.0	146.0	147.0	147.0
172.5°	137.0	135.0	136.0	139.0	139.0	138.0	140.0	141.0	140.0	141.0	140.0
175°	136.0	134.0	135.0	137.0	137.0	137.0	138.0	139.0	138.0	139.0	138.0
177.5°	137.0	136.0	136.0	139.0	138.0	138.0	139.0	140.0	139.0	139.0	138.0
180°	140.0	140.0	140.0	140.0	140.0	140.0	140.0	140.0	140.0	140.0	140.0

REPORT NUMBER: P198478

CATALOG NUMBER: TT-C4-LED-E1-WQ-SG-MS/DIM-UPL

CANDELA DISTRIBUTION (continued):

	55°	60°	65°	70°	75°	80°	85°	90°
0°	586.6	586.6	586.6	586.6	586.6	586.6	586.6	586.6
2.5°	590.5	590.5	590.5	590.5	590.5	590.5	590.5	590.5
5°	598.3	598.3	598.3	598.3	598.3	597.0	597.0	597.0
7.5°	610.0	610.0	610.0	610.0	610.0	608.6	608.6	608.6
10°	628.1	626.8	626.8	626.8	626.8	625.5	626.8	625.5
12.5°	651.4	652.6	652.6	651.4	652.6	650.1	650.1	650.1
15°	683.7	682.4	682.4	682.4	682.4	681.2	681.2	681.2
17.5°	720.0	720.0	718.7	718.7	717.4	716.2	716.2	716.2
20°	762.8	761.5	760.2	758.8	757.5	755.0	753.7	753.7
22.5°	806.8	805.5	804.1	802.9	801.6	799.0	796.5	796.5
25°	855.9	853.4	852.1	849.6	846.9	844.3	843.1	841.8
27.5°	915.5	913.0	909.0	905.2	900.0	898.7	896.2	896.2
30°	986.8	983.0	977.7	971.3	966.0	960.8	958.3	957.0
32.5°	1069.7	1064.5	1055.4	1047.6	1038.6	1033.4	1029.6	1026.9
35°	1166.8	1159.0	1148.7	1137.0	1125.3	1116.3	1109.8	1109.8
37.5°	1280.7	1269.1	1253.6	1239.3	1222.4	1212.1	1204.3	1199.1
40°	1405.1	1388.3	1368.8	1350.7	1331.3	1317.0	1305.4	1306.7
42.5°	1528.1	1513.8	1490.5	1468.5	1443.9	1424.4	1410.3	1408.9
45°	1657.6	1639.4	1610.9	1582.5	1554.0	1530.7	1513.8	1511.2
47.5°	1778.0	1758.6	1725.0	1690.0	1658.9	1633.1	1614.9	1612.3
50°	1876.5	1853.2	1818.2	1780.6	1747.0	1718.5	1699.0	1693.8
52.5°	1940.0	1914.0	1876.5	1831.1	1794.9	1762.5	1739.1	1732.7
55°	1950.3	1916.6	1876.5	1825.9	1785.8	1749.5	1723.7	1715.8
57.5°	1879.0	1842.7	1806.6	1762.5	1722.3	1683.5	1662.7	1652.4
60°	1740.5	1712.0	1682.2	1642.1	1609.7	1573.4	1556.6	1551.5
62.5°	1581.1	1556.6	1529.3	1488.0	1460.7	1428.4	1412.8	1406.4
65°	1410.3	1381.8	1355.8	1322.2	1292.4	1265.2	1243.2	1240.6
67.5°	1221.1	1191.4	1169.3	1139.7	1109.8	1083.9	1069.7	1061.9
70°	1021.8	997.1	975.1	942.7	923.4	898.7	888.4	880.6
72.5°	823.6	809.3	782.2	761.5	739.5	720.0	713.5	705.7
75°	637.1	620.3	599.6	586.6	569.8	559.5	554.2	549.0
77.5°	467.4	453.3	441.6	436.4	428.6	418.3	414.5	410.5
80°	323.7	317.2	309.5	308.2	303.1	295.2	293.9	292.7
82.5°	209.8	206.0	203.3	203.3	200.7	195.5	194.3	194.3
85°	116.6	115.2	116.6	115.2	112.7	110.1	110.1	110.1
87.5°	38.8	38.8	40.1	41.5	37.6	37.6	36.3	36.3
90°	28.0	30.0	32.0	33.0	34.0	34.0	34.0	34.0
92.5°	28.0	30.0	32.0	33.0	35.0	36.0	36.0	36.0
95°	30.0	32.0	34.0	35.0	37.0	38.0	39.0	38.0
97.5°	33.0	34.0	34.0	35.0	36.0	36.0	36.0	36.0
100°	36.0	37.0	38.0	38.0	38.0	38.0	37.0	37.0
102.5°	43.0	44.0	44.0	42.0	42.0	41.0	41.0	41.0
105°	54.0	54.0	53.0	51.0	49.0	48.0	48.0	49.0
107.5°	68.0	68.0	66.0	63.0	60.0	59.0	59.0	60.0
110°	84.0	83.0	84.0	81.0	78.0	76.0	74.0	75.0

REPORT NUMBER: P198478

CATALOG NUMBER: TT-C4-LED-E1-WQ-SG-MS/DIM-UPL

CANDELA DISTRIBUTION (continued):

	55°	60°	65°	70°	75°	80°	85°	90°
112.5°	102.0	102.0	105.0	103.0	100.0	98.0	95.0	94.0
115°	121.0	123.0	125.0	124.0	123.0	121.0	116.0	113.0
117.5°	138.0	140.0	141.0	139.0	139.0	139.0	133.0	129.0
120°	150.0	151.0	153.0	148.0	148.0	148.0	145.0	142.0
122.5°	159.0	160.0	162.0	156.0	155.0	156.0	153.0	150.0
125°	167.0	167.0	168.0	164.0	163.0	164.0	160.0	158.0
127.5°	176.0	175.0	175.0	173.0	173.0	173.0	166.0	163.0
130°	183.0	182.0	183.0	181.0	184.0	181.0	171.0	169.0
132.5°	190.0	189.0	192.0	189.0	192.0	190.0	179.0	176.0
135°	196.0	197.0	201.0	199.0	199.0	195.0	185.0	184.0
137.5°	203.0	205.0	210.0	207.0	204.0	198.0	191.0	190.0
140°	212.0	214.0	217.0	214.0	209.0	202.0	195.0	195.0
142.5°	220.0	222.0	223.0	217.0	211.0	204.0	198.0	198.0
145°	230.0	230.0	227.0	217.0	211.0	205.0	201.0	202.0
147.5°	239.0	236.0	229.0	218.0	212.0	207.0	204.0	206.0
150°	242.0	240.0	232.0	220.0	214.0	211.0	210.0	211.0
152.5°	242.0	241.0	235.0	223.0	219.0	217.0	215.0	216.0
155°	238.0	237.0	234.0	227.0	224.0	223.0	220.0	219.0
157.5°	228.0	229.0	229.0	226.0	226.0	225.0	222.0	219.0
160°	215.0	217.0	219.0	219.0	221.0	222.0	218.0	215.0
162.5°	196.0	199.0	200.0	201.0	204.0	208.0	207.0	207.0
165°	176.0	179.0	181.0	181.0	185.0	189.0	190.0	192.0
167.5°	160.0	163.0	165.0	164.0	168.0	171.0	172.0	174.0
170°	148.0	150.0	152.0	152.0	155.0	158.0	159.0	160.0
172.5°	141.0	144.0	145.0	144.0	146.0	149.0	149.0	151.0
175°	138.0	140.0	141.0	140.0	141.0	143.0	143.0	144.0
177.5°	138.0	140.0	140.0	138.0	140.0	141.0	141.0	141.0
180°	140.0	140.0	140.0	140.0	140.0	140.0	140.0	140.0

(END OF REPORT)